

Patent Claims

1. ~~A transmitting facility (20) for a multipoint-to-point synchronous CDMA network (NET), comprising a unit (23) for generating a CDMA-coded information signal,~~

characterized in

that a unit (21) is provided for generating an acquisition signal, with encoding being performed using an acquisition code which is not a CDMA communication code, the signal level being telemetrically adjustable, and the acquisition signal being transmitted in the same transmission channel as the information signal.

2. A receiving facility (10) for a multipoint-to-point synchronous CDMA network (NET), comprising a unit (15) for receiving and detecting a CDMA-coded information signal and a unit (11, 12) for receiving and detecting an acquisition signal, that the unit (11, 12) for receiving and detecting an acquisition signal comprises a logical correlator (11) for correlating at least two serially

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~~transmitted, identical acquisition signals with an acquisition code which is not a CDMA communication code, and an accumulator (12) for accumulating the correlated acquisition signals, by means of which the detection of the acquisition signal can be carried out, the acquisition signal being transmitted in the same transmission channel as the information signal.~~

3. An acquisition method for a multipoint-to-point synchronous CDMA network (NET) comprising at least two terminals (2, 3, 4, 5) and a center (1), the terminals (2, 3, 4, 5) transmitting CDMA-coded information signals and acquisition signals to the center (1),

characterized in

that in order to achieve synchronization, each of the terminals (2, 3, 4, 5) transmits serially to the center (1) at least two identical acquisition signals whose levels are telemetrically adjustable by the center (1) and which are transmitted in the same transmission channel as the information signal, and that the center (1) detects the acquisition signal by logically correlating (11) the acquisition signal with an acquisition code which is not a CMDA communication code, and by subsequently accumulating (12) the correlated acquisition signals.

4. A transmitting facility (20) as claimed in claim 1 or a receiving facility (10) as claimed in claim 2 or a method as claimed in claim 3, characterized in that the ~~acquisition code is a Barker code.~~

5. A receiving facility (10) as claimed in claim 2, characterized in that at least two logical correlators and at least two accumulators are provided for detecting at least two acquisition signals with different time

relations to the CDMA signals and/or for allowing the use of two or more acquisition codes.

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~~6. A receiving facility (10) as claimed in claim 2 or 5, characterized in that at least one matched filter serves to implement one or more correlators.~~

7. A transmitting facility (20) as claimed in claim 1 or a receiving facility (10) as claimed in claim 2 or a method as claimed in claim 3, characterized in that the length of the acquisition code is shorter than the length of the CDMA communication code by at least a factor of five.

~~8. A receiving facility (10) as claimed in claim 2 or a method as claimed in claim 3, characterized in that prior to or after the accumulation, squaring is performed.~~

9. A method as claimed in claim 3, characterized in that after estimation of the number of colliding terminals (2, 3, 4, 5), different contention-resolving techniques are used.

10. A method as claimed in claim 3, characterized in that the center (1) is adapted to telemetrically specify the transmitted power of the acquisition signals of the terminals (2, 3, 4, 5) in such a way that the sum level of all simultaneously transmitted acquisition signals is at least 10 dB lower than the sum level of all simultaneously transmitted information signals.

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